

**Amendments to the Claims:**

This listing of the claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (Previously presented) A fuel filter for diesel engines with high pressure direct injection of common rail type and the like, comprising an outer casing provided with a fuel inlet conduit (3) and an outlet conduit (4), and internally housing a filter means, said casing comprising an upper chamber (6) for containing said filter means, a lower chamber (7) communicating with said upper chamber to collect the water which said filter means (5) separates from the fuel, and means (8) for measuring the level of the water collected in the lower chamber (7), characterised in that said means for measuring the water level in the chamber (7) comprise a temperature sensor for generating an electrical signal, said signal being fed to an electronic card by two conductors.

2. (Currently amended) A filter as claimed in claim 1 characterised in that said level sensor means comprises a float positioned in the ~~collection~~ lower chamber and having a specific gravity between the specific gravity of water and that of the fuel, and a float guide stem in the interior of which there is positioned a magnetic field sensor connected electrically to said electronic card by two

conductors, said temperature sensor means being positioned in the interior of said stem in proximity to its upper free end.

3. (Previously presented) A filter as claimed in claim 2 characterised in that one of the conductors connecting said temperature sensor means to said card is also connected to said magnetic field sensor.

4. (Previously presented) A filter as claimed in claim 1, characterised in that said temperature sensor is of NTC type.

5. (Previously presented) A filter as claimed in claim 1, characterised in that said temperature sensor is embedded in a layer of conductive resin.

6. (New) A fuel filter with a fuel distribution system for a diesel engine with high pressure direct injection to an engine feed pump wherein the fuel feed rate to the engine feed pump is greater than required by the engine for its operation, the excess fuel being used as a lubrication and cooling fluid for the feed pump, the fuel filter comprising

an outer casing provided with a fuel inlet conduit (3) and an outlet conduit (4),

said outer casing having an upper chamber (6) and a lower chamber (7),

a filter for the fuel disposed in said upper chamber,

a perforated base (50) separating said upper chamber from said lower chamber, said perforated base supporting said filter and permitting water to flow from said upper chamber to said lower chamber,

temperature sensing means (15) in said lower chamber to measure the temperature in said casing and provide temperature information to an engine electronic control unit,

said temperature sensing means comprising a temperature sensor embedded in a layer of conductive resin (150).

7. (New) The fuel filter and fuel system of claim 6 further comprising means (8) for measuring the level of water collected in the lower chamber (7), said means for measuring the water level comprising a float and a float guide stem having positioned therewithin a magnetic field sensor connected electronically to an electronic card (14),

said electronic card (14) providing water level information to the engine electronic control unit, and

wherein said temperature sensor is also connected to the magnetic field sensor for providing temperature information to the engine electronic control unit through said electronic card (14).